

IN THE SPECIFICATION

Please amend the paragraph at page 1, lines 3-6, as follows:

The present invention relates to a quantum communication system which may be used for quantum key distribution between two parties. More specifically, the present invention relates to a quantum communication system which possesses a higher bit-rate than a conventional quantum communication system.

Please amend the paragraph at page 2, lines 13-17, as follows:

The photons sent by Alice to Bob are encoded by an appropriate apparatus and sent to Bob over a communications medium such as a fibre optic cable or through free space. Photons will be lost in Alice's and Bob's apparatus due to inefficiency of its components, or while in transit from Alice to Bob over the communication medium. This loss further reduces the bit rate.

Please amend the paragraph at page 2, line 25 to page 3, line 2, as follows:

In order to address this problem, the detector is gated so that the detector is only on for the time when a photon is expected and then switched off. The detector is switched off for long enough to ensure that it does not register a false positive reading when it is switched back on. This requirement further decreases the possible bit rate of the communication system.

Please insert the following heading between lines 2 and 3 on page 3:

SUMMARY OF THE INVENTION

Please delete the heading between lines 5 and 6 as follows:

SUMMARY OF THE INVENTION

Please insert the following heading between lines 4 and 5 on page 12:

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Please cancel the original Abstract at page 50, lines 1-10 in its entirety and insert
therefor the following replacement Abstract on a separate sheet as follows: